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THE DISTRIBUTIVE RELATIONS OF INDIRECT GOODS

SUMMARY

The relative movements of products and costs as related to crises; various views, especially Carver's positions, one of which was underwritten by Mitchell, 635. — Prices and wages, prices and consumers' goods, prices and margins, prices and titles of ownership, 638. — The widening margins of good times; material costs versus wage costs, 643. — The narrowing margins of bad times; materials versus labor, 645. — Remoteness as a distributive category, 646. — Varieties of raw materials and of appliances, 648. — Speculation as explanation for the statistics, 654. — Divergencies between dates of contracts and of quotations and between the unlisted manufacturers' prices and the listed wholesalers' prices as probably the main explanation, 660.

It was not unfamiliar two decades ago that booms in the stock market arrive in good times and that panics and the crumbling of stock quotations befall with crises. Robertson and Hobson had still earlier noted the tendency toward overextended investment in equipment goods. Was this tendency chronic or only occasional? How far had it to do with business reactions? Or rather was it a cause of continual stagnation — in either case an industrial rather than a financial phenomenon? Professor Carver in 1903 found the explanation partly — perhaps, however, primarily — in fluctuations of earning power and of dividends, partly in a consistent overvaluation of existing properties or of existing equipment goods, partly in an overextension in the volume of investment in these equipment goods.[1] Professor Veblen in 1904 placed his emphasis on the revaluation process.[1] It is perhaps fair to say that the position of Professor Carver is of especial interest at the present time in view of the fact that his views have gained the support of the commanding authority of Professor Mitchell in this field.[2] It is therefore to the present purpose to determine precisely the position or positions taken by Professor Carver.[3]

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[1] "A Suggestion for the Theory of Industrial Depressions," Quarterly Journal of Economics, May, 1903, vol. xvii, p. 497.

The point of departure with Professor Carver is the demonstration that slight changes in selling prices may involve large changes in unit margins and enormous variations in business gains or corporate dividends. If, for example, the shoes that have sold for $2.25 with a margin of gain of twenty-five cents are now selling at $2.50 with a margin of fifty cents, the earnings of the business may double without any change in the volume of concrete product. Thus, if this rise in prices and margins " were believed to be permanent, the value of the plant would double " — an increase of only one-ninth in the selling price bringing about an increase of 100 per cent in the value of the business, " the plant," as Carver calls it. If on the other hand the price of shoes fall by twenty-five cents, the margin thus disappearing, the " plant " (the business, the concern, the enterprise ?) might become worthless — if, of course, the prospect were of this same sort. But it was obviously no necessary part of this aspect of the immediate problem to ask why the margins were widening or contracting, or how far the selling price could advance without the costs advancing, or whether the usual fact were one of wider margins of gain with rising prices or rather of narrowing margins through the relatively greater acceleration in the prices of the cost goods.

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[1] Theory of Business Enterprise.

[2] Business Cycles, p. 104.

[3] Cf. in the Journal of Political Economy for September, 1904, p. 629, a note by the present writer on " Relations of Business Profits to Industrial Depressions."

Some part of the factual situation, however, Carver could safely assume, even if no theoretical explanation were offered or attempted. The margins of business gain do in general rise with the rise of prices of direct goods — ultimate or finished or consumption goods. Common observation will perhaps suffice as proof; the movement of stocks in times of this sort, good times, has no other intelligible basis. Dividend materials, divisible gains, increase when prices are on the upgrade, the intake in price, the credits, expanding more rapidly than the debits. Certain of the costs — perhaps all costs — the prices of indirect goods, lag behind the rising prices of direct goods. Otherwise there could be no widening margins of business gain, no larger room for later contractions of gains, no basis for any serious menace of recurrent collapse in the stock exchanges.

It is, therefore, only by tacitly assuming this relative lag of costs, either with all of them or with a part of them, that Carver's first and particular formulation can be taken as valid: "a slight fluctuation in the value of a product tends to produce a violent fluctuation in the value of the establishment producing it." This tacitly assumed lag of costs is, I think, not open to question. The law deduced is, therefore, equally immune from attack. Only what does the "establishment" connote or include? The stocks are rising in the markets as the dividends go up. The business, the enterprise, the corporation, as it earns more, comes to be worth more, the proprietorship a more valuable property in the aggregate, the security titles selling higher as separate holdings. But specifically, what is it within the corporation or the business complex or aggregate that is rising? Is it the machinery, or the raw materials, or the finished products in the warehouse, or the buildings, or the good will, or the sidetracks or the organization ? Perhaps it is each and all. The only direct pronouncement of the market is that the securities, the titles of proprietorship in the aggregate of all of these things, are rising. But why? Clearly because they represent more income. The earning power due to wider margins between costs and selling prices is more generous. So far, then, as the items in the " establishment " are taken to be worth more merely as representative of the higher costs of the various items making up the aggregate of the " establishment," there is nothing to be implied with relation to the volume of gains. Any higher selling price for the stocks could report solely that the concern might be liquidated on favorable terms, the organization abandoned, its good will for going purposes sacrificed, the business dismantled, the assets sold and dispersed.

We are compelled then for purposes of explaining the market valuation to reason from earning power to present worth. " The establishment " as an aggregate is not now worth more because the cost of reproducing its constituents would now be higher but because there is an earning power which for a time is not menaced by new businesses promptly organizing and equipping to share in the generous sale prices. The higher present worth upon the land, equipment, good will and what not, does not therefore represent new and higher costs in placing goods upon the market. Doubtless some of the items in the complex would cost more now to buy them than they originally cost — not that in their turn these new items need cost more to produce them, but because there is a relatively smaller volume of productive power equipped to meet the stress — an inelastic supply. But the aggregate worth of the establishment is not the aggregate of these equipment prices. So far, indeed, as any particular item in the establishment can have a higher price attributed to it separately, on either a cost basis or a purchase price basis, this would quote a price too low for it. The disposition to purchase, the bidding prices of buyers for the replacement or extension of equipment, must be due to the prospective earnings dependent upon the equipment during the period of high selling prices and to the limited supplies of equipment, and cannot be explained solely by the cost of production attaching to the new equipment, or even to the purchase prices which must be paid to get it. Thus, to identify the high earning power of a business with the high prices of its various constituent parts is to blur all the lines of causation in the problem. It is indeed worse than this. To regard the rising margins of production reported in higher dividends and registered in higher capitalized present worths as themselves constituting a higher cost and as justifying the inference that other costs are rising — for example, raw materials — would be parallel to regarding your own gains from entrepreneur supervison as rising costs in your production, and to inferring therefrom that your other costs were rising also.

Carver's first law, or his general law in its first or restricted statement, may then be accepted so far as it declares that small fluctuations in the prices of products (more accurately in the margins) tend to produce violent fluctuations in the earning power of businesses and in the market prices of the titles of proprietorship.

We recall now that fluctuations in the prices of products are significant for either gain or loss only in the degree that the net margins between selling prices and the outlays for production are wider — only in the degree therefore that the costs lag behind the selling prices. Why, after all, do not all the costs rise to take up the slack ? Why, for example, in times of rising prices do they so lag behind the prices that the proprietorship titles may become so much more attractive to investors ? Some equipment goods, certainly, during times of brisk demand for replacements or extensions, show actually no lag, but rather a pronounced acceleration. Here then comes in the significance of Carver's amplification of his law, " stated in still more general terms: The value of producers' goods tends to fluctuate more violently than the value of consumers' goods." (p. 498.)

Possibly so; but is this either a restatement of the previous formulation or a corollary from it ? The stocks fluctuate more violently — e. g., rise by a higher percentage than the products — and, therefore, as the argument appears to run, raw materials will also fluctuate more. But why ? And in which direction — parallel with the dividends or in the contrary direction ? If dividends are to rise, raw materials in general ought to be low relatively to the selling prices of products, in view especially of the fact that the particularly scarce and expensive equipment goods are cutting seriously into the margins for dividends. But Carver does really mean that raw materials rise with prices and that dividends rise—as is commonly true—and means also that the raw materials rise faster than the rising prices. Possibly this last is also true, merely requiring explanation. It is, at any rate, in this sense that Mitchell reasserts it, and purports to offer statistical verification of it. But obviously this second formulation is something far removed from either a corollary or a restatement of the preceding law. It is by implication nearer to a direct denial of it.

But Carver goes farther, and Mitchell along with him, tho Mitchell does not thereby commit himself to regarding Carver's third formulation, more than the second, as either a logical corollary or an amplified statement of what has preceded.

This third formulation asserts that " the further removed the producers' goods are from some consumable product and the more remotely their value is derived from that of some consumable product, the more violent the fluctuations in value tend to be." (p. 498.) But how can this be true? Whether, at any rate, as extension or as corollary of either or both of the earlier formulations, or as essentially the negation of either or both, Professor Mitchell accepts and supports it as statement of fact, allotting to it an apparent statistical verification, and interpreting it into a valuable contribution to the theory of business crises.

Such further quarrel, therefore, as I have it in mind to make, seems to lie chiefly with Professor Mitchell. " The evidence, so far as it extends, supports the contention that the relative demand for such supply of producers' goods is more sensitive to alterations of business conditions than . . . consumers' goods . . . a statistical foundation for the theory of business cycles which Carver has suggested." [1]

Such may, of course, be actually the case. I am inclined, however, to dispute it as fact, also, somewhat less confidently, to contest its theoretical significance for the purposes at hand. It goes without saying, however, that I do not deny the rising dividends or the rising stock prices that go along with the rising prices of direct goods, or the overcapitalization, or the intimate causal connection of this class of facts with financial upheaval and industrial depression. Nor do I at all contest—instead I am inclined to stress—certain other of Mitchell's statistical deductions. It is doubtless true — earlier statisticians have asserted it and theorists in general have long accepted it — that wages lag behind prices on either the rise or the fall. This is, indeed, one of the accredited explanations for the widening margins of entrepreneur gains. With Mitchell, I believe also that retail prices lag behind wholesale prices on either market slope. One formulation of the present issue might therefore run as follows: is it true that wages and indirect goods move parallel with each other relative to the changing prices of direct goods, or is it rather true that the movements are antithetical ? Why indeed should raw materials rise faster than finished products, while the wages lag ? And what is the actual nature of the statistics that appear so to indicate ? Are raw materials, more than laborers, like the inelastic equipment goods that get higher prices because of a relative, even tho temporary, scarcity ?

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[1] Mitchell, Business Cycles, p. 104.

It is not in my power to check up these statistics. Like most economists, I have believed either that the high costs make the products high or the high products make the costs high. Either view would by the test of these statistics appear to be untenable, but especially untenable the notion that deduces the prices of the factors, the costs, from the prices of the products — the backward -reflecting view. But in either case, why this general and cosmic partiality for raw materials against labor when prices are rising, this consistent unfairness to wage earners ? True, wages do lag behind prices on either the rise or the fall, but this I had supposed to be merely one aspect of the fact that entrepreneurs consent to pay higher for their costs only as following on the assurance, and as motivated by the assurance, that they can sell at higher prices. This new notion, as deduced from the statistics, would imply that the employers take precisely this attitude toward the laborers, but partly offset it by bidding higher for the raw materials, even before the assurance of high selling prices arrives; that thus the one principle of motivation breaks into two applications in point of time, and therefore in point of outlay and of gain — less for labor and more for raw materials, relatively to the price results accruing to enterprise. But why ? It is still clear enough in any ultimate sense that labor also is a raw material. And not only this, but it is that particular sort of raw material, that special factor, noticeably inelastic in point of supply — inelastic in total supply and relatively inelastic in particular supply. By many economists, indeed, is labor regarded not merely as a raw material, but as, in last analysis, the only raw material — all capital, machines or raw materials, representing merely past labor or past wages advanced to labor. That I am unable to see the thing after this fashion helps me not at all in the present perplexity. Nor does the productivity theory in any one of its different aspects or formulations serve better. Why these divergencies of materials from labor in the distributive process ?

But taking these divergencies as actual, the perplexities merely multiply. Prices, we will say, are rising more rapidly than wages, but less rapidly than raw materials. But still the margins, the dividends, are widening. The lag in wages must then be making good the higher gains both for material men and for employers. But still the material men are especially prospering — deriving advantage not merely by relatively high charges to the producers of finished goods but also through hiring wage-lagging laborers. Each producer next along in the series toward the finished good gets only a part of what the laborers lose. In part it is handed over to his respective material men. But if the raw material always rises rapidly relatively to its immediate product, and if the final product is based upon a succession of intermediate products, each having its respective raw materials, these geometrically increasing margins for the raw material men must make correspondingly increased inroads upon the dividends of the industries of the ultimate finished products. Thus these should be ideal times in which to restrict rather than to increase output, unless, indeed, the dividends are made good out of wages — with something to spare even for the margins in the last stage of the productive process. But evidence is lacking to show that any class of dividends is failing to participate in the general good fortune. It must then be true that the laborers at this final and ultimate stage of production are making good, in the form of shrinking real wages, the cumulatively rising margins of the raw material and final products men. The laborer "pays it all." And still these are good times for all employers —times of brisk employment, lively competition—and yet with real wages especially suffering in the final industries; the while that all employers are in fierce competition to increase their labor forces, are permitting, indeed, the stress for product to push them into the inefficiencies of over-time or into the employment of inferior grades of labor. Why, under these conditions, do not the exploited laborers drift over to the fields of industry in which their contribution to entrepreneur margins is less generous ? So far as I know —or as Mitchell in any way indicates—there is no evidence that the employees in the final industries suffer the more in real wages; nor is this *a priori* probable or even credible.

But if we have found it hard to understand how the margins of enterprise in general are rising in good times, we shall find it still harder to see how they are narrowing in bad times — why the good times are good and the bad are bad. We know that when, on the upgrade of prices, wages are beginning to catch up, the dividends get smaller. But this must assume that the materials are not making a relative and offsetting fall. And yet if they are not, a bad period for business must be beginning — or have already begun — and the wage level, therefore, be turning already toward fall, in the accelerated foreshadowing of the prospective fall in prices. And if this takes place as the result of prospectively narrowing margins, there should be no narrowing margins. The assumed catch-up in prices must somehow change precipitately back into a lag. For actually — as we are told — the raw materials precede in fall the fall in the prices of the finished products, and fall faster and fall farther. "The prices of raw materials respond more promptly and in larger measure to changes in business conditions than do the prices of their products."[1] If there is any explanation it must be that wages are still rising after product prices are falling and long after raw material prices have been falling; which we know — being so assured — cannot be.

Let us follow this process along down the full curve of the decline. The raw materials, antedating in decline the decline in the prices of their products, fall faster and also to lower levels. "Producers' goods" (raw materials) reached their highest point earlier in 1907 than consumers' goods. . . . Their decline in 1908 greater in degree, their recovery sooner and . . . at a faster rate." (p. 99.) "The relative demand for and supply of producers' goods is more sensitive to alterations of business conditions than the relative demand for and supply of consumers' goods." (p. 104.)

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[1] Business Cycles, p. 102.

Why, then, the bad times? The spread between product prices and producers' goods is greater the more marked is the fall in the price of products and the longer it continues, and, as Carver asserts and Mitchell confirms, the farther removed from the final direct good is the producers' good. Especially, then, should the industries of fundamental raw materials, the extractive industries, be prospering. For them it should be a good time for dividends and for stock prices and for increase of output, rather than a time for depression or reaction or panic. But the fact appears to be that not even these primary industries are prospering; there is no evidence of any general line of differentiation between industries in this regard. The general lag in the wage fall must then explain the entire case. But unless the wages lag the more in the fundamental industries — thus manifesting another puzzling tip-up in the wage level — the final industries, the finished goods industries, must be in a parlous case. They are getting relatively less relief on the side of raw materials, and no less harm from the inelastic wages than the other industries lower down the scale toward the primary, and yet somehow can't quit offering a market to the less unprosperous underlying industries — are being mulcted by wage earners and, relatively speaking, by raw material men — and all this to the especial gain of wages on the extractive level. But these chiefly suffering industries still go on; and their laborers stay with them, oblivious of the better wages offering elsewhere; and the supplies of raw material and finished goods so far maintain themselves, and so far prevent a rise in general prices, that real wages are relatively high. So once again emerges the puzzling divergence between the two classes of raw materials. As on the upgrade of prices in the good years the wage factor, through the wage lag, was the only explanation of this goodness — was the sole source at whose expense gain could accrue to the industries of final products — and was a further sufferer as solely furnishing an offset to the rapid rise of producers' goods relative to the price of their products, so now, in times of falling prices, these bad years are prevented from becoming good years only by the exactions — quite unequally distributed relatively to the ability to bear them — that are imposed by wage earners. The raw material men are now taking advantage of the final products men so that these latter lose. And yet the raw material men fall in turn into equally great losses through the increasing exactions of wages. Wages are inelastic against fall, but unequally inelastic in the different levels of industry, with the result that inequalities in deficits are further exaggerated.

Under closer inspection this line of possible explanation does not turn out to be attractive. Shall we try another: the shrinking volume of turnover in dull times ? But still, why should the ill effects be so unevenly distributed between labor and raw materials, and so unevenly between different raw materials accordingly as they are more remote from final products, and so unevenly again between wages in the different levels of industry, to the degree that differences in relative wages are the only explanation for the general dull business. And why should there not be either statistics or observation to support this view ? In point of fact however — in point at least of general opinion and observation, as well as of inference from Professor Mitchell's investigations—these differences of turnover between good and bad times are not great. " The volume of domestic trade is subject to so large a factor of growth that it contracts but a trifle when business is dull . . . expanding faster than usual when business is good." (p. 244.) I take the actual volume of concrete product, rather than product in terms of price, to be here in question. If however, account is made of falling prices, the deficit in product must be still the narrower, bad times having little social significance, and retaining importance merely in the psychology and temper of business men in price computations under price competitions.

Still other lines of exit must be tried. How indeed shall one assume to deny the facts or the statistics because they make trouble for his theories. Better obviously to revise the theories.

And so say I, only with some choice of the theories to be revised. In fact, also, I do not go so far as to deny the statistics. They seem still credible, and to be questioned only as regards their adequacy for purposes of theoretical deductions, and still more as regards their interpretation. First, however, it will be well to make certain of the issue. I make no question that retail prices fluctuate less than wholesale prices, lag relatively, rise later and less, fall later and less. In the lack of any precise information as to manufacturer's prices, it may be taken as probable that the wholesale prices move later and fluctuate less than manufacturer's prices. It seems quite clear that in times of rising prices for direct goods some producer's goods — the equipment goods of inelastic or slightly elastic supply — must rise more sharply and to higher levels than the direct goods in the production of which these equipment goods are factors. What I deny is that *producer's* *goods in general or raw materials in general* can in the average rise faster in price than the manufacturer's prices for the products — formulations, for example, like the following: "Consumer's goods even at wholesale are more stable than producer's goods." (p. 98.) "The prices of raw materials respond more promptly and in larger measure . . . than do the prices of their products." (p. 102.) "Relative demand for and supply of producers' goods is more sensitive to alterations of business conditions than the relative demand for and supply of producers' goods." (p. 104.)

But there are various sorts of raw materials; do they fall safely within one generalization? And producers' goods comprise both raw materials and equipment goods; is it safe to generalize these into one inclusive formulation? And, so far as either is concerned, is it safe to infer the greater fluctuation for the more remote?

First, as to remoteness: It is generally held that the factor that is relatively scarce gets the larger distributive advantage. But remoteness and scarcity need not in the slightest coincide. In this respect, in truth, Carver has been more cautious in his statement than Mitchell in his underwriting. One aspect of what I conceive to be the better doctrine, Carver brings out clearly as a limitation upon his generalization that the most remote goods fluctuate most. In this connection he makes the question one rather of the degree of specialization and of use — allowing, however, nothing to the question of the relative rapidity of the adjustment of supplies of equipment to changing demands. He says: "This would be the tendency [toward larger fluctuation] until that stage was reached when the producer's agents were no longer especially connected with one particular line of production and were not therefore affected in value merely by changes in price of the one kind of consumable product."[1] But this is to show how, on occasion, remoteness may not explain the relative fluctuation, not to show how it commonly does. Why think that "the farther removed . . . and the more remotely the value is derived . . . the more violent the fluctuation?" Relative scarcity is enough whether by the restriction of the sources of supply, or through the necessary period of adjustment due to the length of the productive period, or through delay attached to the installation period, or by the larger risk costs attaching to new installations — the constant menace of a slump in prices. For it is true, as Professor J. Maurice Clark has admirably shown, that equipment goods are especially unstable in price.[2]

To test out this question of remoteness, let it be assumed that there takes place in America a great and sudden increase in the demand for pictures of the Kaiser, to be painted on materials or requiring pigments closely limited in supply or controlled under one ownership. The rise in painters' earnings need not be appreciable — enough merely to divert them from the acceptance of other orders. The possibly enormous rise in the prices of finished paintings might well be practically absorbed by the rare materials, the fabrics or the pigments. That this is in no degree a question of remoteness, but only of the relative scarcity of the available factors — an example of the "unique good," strategically favored in the distributive process — may be illustrated by assuming the rarity to attach solely to some one artist of special repute for skill of touch, or, say, to some one brush of an exclusive and magical virtue. The gains would then be absorbed by painter or brush owner to the practical exclusion of canvas or pigments.

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[1] Op. cit., p. 498.

[2] See Journal of Political Economy, vol. xxv, No. 111 (March, 1917), "Business Acceleration and the Laws of Demand."

So far, however, as the analysis has yet proceeded, it is only the remoteness doctrine that comes under discredit. The formulation may still hold for raw materials or for producers' goods in general, tho the reasons therefor remain inscrutable. In fact, as we have seen, it does hold for some of the producers' goods; particular equipment goods may especially rise during the time of their relative scarcity and fall in the time of their relative plenty. Doubtless also the formulation holds in varying degrees for certain other goods of the raw material class. Inevitably, I should think, in any period of rising prices, some raw materials must be running relatively rare compared to others, must therefore rise in price relatively to the finished product, and must rise especially with relation to the other raw materials that are lagging relatively to the finished product, or are even falling in price. All this does not need imply that I discredit Mitchell's statistics in themselves; only in the interpretations attached. Statistics will doubtless always be available of the sort to present the perplexities under consideration and to invite the generalizations deduced, precisely as statistics of the opposite emphasis are also always to be had. Raw materials vary in their elasticity of supply and in the promptitude of response to new demands; but these variations do not run parallel with their variations in point of remoteness. In fact, a raw material that is remote in respect to some finished products will be proximate with respect to others.

Either by direct analysis or by implication it sufficiently appears that to generalize raw materials by the test of remoteness so that relatively to the rising prices of products all shall rise, varying only in their degree of rise, is impossible. So again, there is as yet nothing to indicate that any general and uniform rise of " raw materials " takes place. If it is actual, we still have the explanation to seek.

I believe, however, that it is the far easier task to explain how the generalization has succeeded in recommending itself. Carver, we recall, found it practicable to go from titles of proprietorship to producers' goods in general. Mitchell has found his way from producers' goods in general to raw materials. For Mitchell's view the ambiguous connotation of *producers' goods* may readily furnish the explanation. By comparing " fifty-five commodities bought almost wholly for family use [bread, meat, cloth, wringing machines, brooms, hard coal, gasoline, stew pans] and seventy-three commodities [lubricating oils, wheat, cattle, hogs, equipment goods, ores, soft coal] bought almost wholly for business use," (p. 98), he finds the range of price variations relatively great and the movement relatively early for producers' goods as against consumers' goods.

The data should indeed be entirely adequate for the inference, if only among the seventy-three producers' goods there were any appreciable number of equipment goods. A small number of these, indeed, would spread the mantle of rise over a much larger number of raw material goods — goods that in the average might easily be neutral under the test, some of them inevitably rising, others inevitably falling relatively to their products. The generalization is therefore worthless for any purpose of distributive theory, no matter what may be its significance for Mitchell's especial problem. It groups things under one tendency that are separate in the influences bearing on them. And obviously it affords no basis for the generalization that *raw materials* rise in price earlier and faster or higher than finished products — that, as Mitchell puts it, " the manufactured goods used by producers show wider oscillations [than manufactured goods used by consumers] . . . the raw producers' goods . . . still wider . . . affording a statistical foundation for the theory of business crises which Carver has suggested." (p. 104.) There remains only the mathematical certainty that if equipment goods are greatly rising relatively to the prices of the products, the raw materials or the labor — or some raw materials and some laborers — will disclose an appreciable lag in relative remunerations.

But Mitchell elsewhere throws some light — and by implication some doubt — on the generalization that he assumes to underwrite. It is indeed true that " the supply of vegetable and animal foods varies in an arbitrary fashion determined by the weather, and the demand for staple foods is less affected by prosperity and depression than that for more dispensable commodities." (p. 95.) So again: "Mineral and forest products are turned out . . . under conditions which prevent a quick adjustment . . . animal products, on the other hand, require a year or two for growth, while the supply of vegetable products depends quite as much on the weather as on efforts to adapt their production to market conditions." (p. 104.) I do not understand him to question that mineral and animal products are in equal degree raw materials for the purposes of the subject in hand. He notes also that " farm products show more frequent and more striking movements of a contrary sort [to the course of general prices]. In 1901 farm products rose while mineral products fell. Farm products did not rise. . . . In 1895 mineral prices did. In 1904 farm products rose in face of business depression . . . mineral products fell; finally, farm products declined but two points . . . mineral prices twenty, in the depression of 1908. . . . A dissonance hardly less striking appears between . . . forest and animal products. . . .

The inorganic mineral products reflect the business cycle with least distortion . . . the organic forest products ranking next . . . 'as a trade barometer.'" (p. 108.) The explanation is clear — and is most important for present purposes. Coal, iron, and timber, second as indicia of trade conditions in their price movements, point merely to products of relatively elastic conditions of supply, relatively prompt in expansion or contraction, moving readily with prices, and preventing, if monopoly is absent, any extreme conditions of scarcity or of surplus.

But still something must be made of Mitchell's generalization that "in each of the four groups [of raw materials — mineral, farm, forest, and animal; all of the raw products there are] the crisis of 1907, the depression of 1908 and the revival of 1909 affected the prices of raw materials earlier and more seriously than . . . the prices of manufactured goods." (p. 109.) For even if we can find no explanation of it, it still may be true — probably is true, if Mitchell so finds it — even tho each particular analysis of contributing causation may seem to discredit it. We must explain either the facts or Mitchell.

There is, at any rate, one possible explanation for the diverging tendencies asserted to manifest themselves between raw materials and labor. One can practicably be contracted for — futures in it purchased — the other cannot. Speculation is possible with raw materials by warehousing, or by contracts for future delivery. No one, however, would care to go far in either method with labor. Not only this, but speculation does not easily or largely busy itself with products ready for consumption.[1]

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[1] "Out of the thousands of commodities bought and sold, the most extensive tables quote less than three hundred. Goods which change substantially in quality from year to year must be rejected, and for goods which are usually the subject of private bargains it is difficult to secure quotations. For the most part, only those commodities are in-

Wheat rather than flour, wool than cloth, cotton than sheetings, corn than meat, attract speculative activities. To the extent, then, that speculation may serve as our explanation, it may be credible that labor may lag in prices relatively to raw materials. But is it also credible that finished products should lag relatively to the raw materials? There is, it is certain, relatively little speculation in finished products. They deteriorate too rapidly in style or otherwise, vary too greatly in quality within the same classification, are too much affected by fancy and personal preference and advertising, are too greatly subject to brand and trademark, to allow readily of speculative handling. In the large, clearly, it is with raw materials that speculation is busy. Labor also has small place on the boards of trade. If there is a retardation of wages relatively to the prices of products, there may, it seems, be room for the relative acceleration in the prices of raw materials.

But if the raw materials are to be credited with the lag in wages, they must be debited with the acceleration in equipment goods. And in any case, the statistical interpretations are not the easier of acceptance, even were there statistics for finished products to make the case a cogent one, and even if, where any price were recorded, it were a manufacturer's sale or contract price rather than merely a wholesaler's price. Whatever, then, may be the truth in the case, the statistical evidence must be mostly wanting to prove it.

The truth appears to be that finished goods, being difficult of sale in the speculative markets, are coming more and more to be produced for future delivery on contract orders of not rarely months or even years ahead,

cluded which are dealt in on public exchanges and those for which dealers post their buying or selling prices. . . . The data concerning manufactured goods are relatively scanty. . . . A considerable part of the business transacted at any given time is done on the basis of prices fixed by earlier contracts, and these prices often differ notably from the current quotations." Mitchell, p. 93.

and that the raw materials are also contracted for long in advance. If, then, prices are rising, it is easily credible that present materials should be bought at present prices as provision against the contractual liabilities for future deliveries that are already being assumed. So, again, it may be more convenient, or even necessary, to make this provision by buying contracts for future delivery rather than by purchasing raw materials for present delivery and storage. In the milling of wheat, for example, the flour may be sold for future delivery, and grain futures purchased to offset. But the very purpose of this hedging, the reduction of the milling business to the mere mechanical process of grinding grain, would fail of accomplishment if the raw materials were on the average higher in the futures market than would correspond with the contract price for the flour. In this sense, the raw material can hardly rise earlier than the finished product, altho it may be true that the raw material price is paid today, the while that the obligation of payment for the flour, which is assumed today, is not to be executed in the form of actual payment till several weeks or months later — and is not quoted at either time. The proper comparison is that of the price of the grain that enters into the flour with the price at which the miller sells the flour. No progressive divergence is credible here — and especially no relatively early rise in the raw material price. But it may still be true that, if the retardation in wages is appreciable, the spread between grain prices and flour prices may be less than if wages corresponded more nearly to selling prices. In this sense and to this degree the rise in grain might be greater than the rise in flour but could hardly be earlier. This greater rise must, it seems, be actual, if it be assumed that the miller is getting no gain for himself out of the general upward movement in prices, excepting possibly through grinding more grain. A suggestion looking in this direction is indeed offered by Mitchell: "The more manufacturing costs have been bestowed upon materials, the steadier do their prices become." (p. 102.) But that the explanation is not safely to be found in the retarded advance in wages is indicated by the fact that for three years after the early days of 1903 the lag in wages did not take place, altho prices were still advancing, and operating margins, as indicated by stock exchange movements, were growing more generous—[1] no gain from wages, a deficit on raw materials, a deficit from equipment goods — but earnings expanding. If, therewith, any theorist, mathematical or economic, should be tempted to demur, he should still hold steadfastly in mind his obligations of reverent humility in presence of the facts.

And still it is not the variable amount of grain to be ground, but the variable charge for grinding it, that allows the miller the expanding margins that he probably gets. And in any case, the labor costs in milling are relatively so small a matter that the wage lag could hardly account for appreciable gains both to the miller and to the raw material men. To the extent, however, that the relatively stable wages enter into the case, it may be true — must, indeed, be true if the rising equipment costs do not afford an offset — that the manufacturers' prices on finished products fluctuate less than the raw materials.

Of one type of industrial process the milling industry affords an exceptionally clear case for the purposes of the present analysis. Its raw materials come direct from the extractive industries; the product is a typical finished product, a direct good, an ultimate consumption good.

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[1] Business Cycles, p. 135.

Possibly, however, the miller is not milling on orders but is selling in the market for immediate deliveries, or is producing for stock; in either case is not speculating. If flour is rising in price, but the wheat rising earlier than the flour and faster at the same time, the miller's case must obviously be a parlous one, with nothing but the lag of wages to shield him from disaster. Present flour, *at the manufacturer's price*, equally with present wheat should be rising — especially if future flour appears certain to go up, and if those millers grinding for future delivery are already getting these higher prices. On any other terms this miller must sell his flour ahead or grind for stock, rather than to market on terms of the low prices for current delivery — prices appropriate neither to the current quotations for raw materials nor to the probable future price of either wheat or flour.

It seems probable, however, that making for stock is in the main confined to periods when the market appears to be temporarily bare of buyers for either immediate or future deliveries. Speculation, we recall, is unimportant with flour. Presumably, therefore, grinding for stock is characteristically a sag-time phenomenon.[1] In fact, however, this should be the especially unwise time for this policy, if it be true that raw materials are running relatively low in price in comparison with the selling prices of products. At such a time, if the inelastic wage costs leave it worth while to run at all, the gain of grinding for present delivery is clear and certain. The gains must be only the narrower by holding till prices drop still further. Millers speculatively inclined should rather hold their products on the rising market and market promptly on the falling. Nor is it to the point for the present purpose that wages may be relatively high. By assumption they are to continue so; grinding for stock will make this difficulty none the smaller. Of course, if the miller can find no buyers, or buyers only on terms of loss, his sole choice lies between suspending and making for stock. But those times when one can hardly sell his products at all are not the times when the selling price can be expected to be high relatively to the raw materials, the raw materials a bargain relatively to the finished product. But assuming this wider spread, the best thing to do when the wages grow discouragingly high, and still the mill must run, and the raw materials offer so attractively good bargains, is to run at full speed for the cash market.

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[1] Mitchell, at all events, takes this view: " In dull times the operators may prefer to accumulate stocks rather than to reduce their output; but, in general, the rate of production is adjusted to the volume of orders." (p. 230.) As I understand this passage, it is intended to apply to the general range of industry, tho it occurs in a discussion of the particular industry of coal mining.

Nor is this all of the trouble. Just as in times of falling prices wages fall late and least, and as in times of rising prices rise late and least, so, as the statistics appear to indicate, " partly manufactured goods pursue a course intermediate . . . the more manufacturing costs [labor and equipment] have been bestowed on raw materials, the steadier do the prices become." (p. 102.) This could most readily be explained by the well established inelasticity of wages, the lag in rise or fall; the more, then, that wage costs enter, the more stable the costs relatively to the sale prices. But the hazardous quality of all these generalizations as to producers' goods as a class, or as to raw materials as a class, or as to partly manufactured producers' goods as a class, may be illustrated by the statistical evidence charted by Mitchell. (p. 100.) For the three years beginning with January, 1905, partially manufactured materials were relatively low compared with finished products. For the first one of the three years the finished products were rising the more rapidly; were holding stationary for the second year, while the semi-raw materials were diminishing their lag; were falling the third year in comparison with semi-raw materials, but were still remaining disproportionately high — the lag of raw materials giving place to a relative acceleration in price only during the rise of all classes of goods during the year 1908.

Our excursions into the field of statistical or theoretical conjecture have thus far not greatly prospered. But there is, I am confident, something to be accomplished in the interpretation of such statistics as Professor Mitchell has found available. It is quite possible that, should ever the available materials become as bountiful as they now are scanty, there might be forthcoming a complete verification of what the actually available data tentatively suggest. For we are to recall that Mitchell's comparison of the prices of indirect with the prices of direct goods reports only the prices of equipment and raw materials and labor relatively to the wholesale prices quoted in the markets, never, or at all events extremely rarely, with the manufacturers' selling prices, either on order or for the current market. The manufacturers' prices are not to be had. Nor are the purchase prices of the manufacturers' equipment readily to be known or, when knowable, commonly reported. The comparisons that are possible are those of certain of the costs with such wholesale prices as are recorded. "The data concerning manufactured goods are relatively scanty; . . . for goods . . . the subjects of private bargains it is difficult to secure quotations; . . . a considerable part of the business . . . is on the basis of prices fixed by earlier contracts, and *these contract prices often differ notably from the current quotations.*"[1] It is in this last clause that I believe the explanation is to be found for whatever incredible inferences the statistics may have appeared to suggest. All the comparisons of the prices of the cost goods to those of the finished goods have run not in terms of what the manufacturer pays relatively to what he receives, but relatively only to what the wholesalers charge. These wholesalers' prices often vary widely from the manufacturers' prices. The contract prices for future delivery may also diverge widely from the actual cash prices at the time of delivery, as also from the prices at which new contracts for deferred delivery are being made. So again, the wholesalers' selling prices on current goods for immediate delivery may differ noticeably from the contract prices under which the wholesaler must later reinforce his stocks. Mitchell reports this to be the fact; and, if it is the fact, as I also hold it to be, the solution of our difficulties is in sight. " Retail prices " we are told " lag behind wholesale prices both on the rise and the fall." (p. 98.) This is probable even were there no statistics in support of it. More commonly than otherwise middlemen base their selling prices on the prices at which they buy. Perhaps this holds of wholesalers less uniformly than of retailers. But with wholesalers it is especially easy to base the selling price of today on the prices at which the goods were bought, this buying price being in turn fixed according to contracts of an earlier execution. Any deviation from this method — and deviations are not improbable — may take place through devices which the current quotations of the wholesale market will ordinarily not disclose. In fact the price lists of wholesalers are not consistent measures and guides as to actual selling prices. The selling force has to receive instructions, but must still retain a wide working margin of discretion. The list prices that are in their hands are indicative of the prices which it is hoped can be obtained — are indeed something like the upper limit of what shall be charged. Under close competition these prices get shaded. If the market discloses upward tendencies, quotations are stiff — the prices "hard." If new supplies promise to be less expensive, the quotations are "soft." But in general the list prices may probably be said to report "cost-plus" prices. Interpreted, therefore, as indicating that the spread between raw material prices and manufacturers' selling prices is narrowing in good times rather than widening — as inferring, that is to say, a distributive doctrine — Mitchell's statistics are easy of misinterpretation. Wholesalers' prices at any given time are probably more likely to reflect with approximate accuracy the delivery prices of that time under contracts made earlier. If so, then the delivery prices of today are the contract prices of a month earlier — not the contract prices of today. In a changing market the wholesalers' prices of any given time probably depart widely from the prices at which, under present contracts, goods will be delivered months later. The current wholesalers' prices correspond more nearly with the prices on current deliveries under contracts made earlier. So far, therefore, they lag behind raw material prices in the current market. The present raw material prices correspond to the prices of goods to be delivered months ahead. Stated in another theoretical emphasis, it is the selling prices of months ahead that are being reflected back on the raw materials of the present market. The present delivery prices should be paired with the raw material prices of say six months ago. The lag of finished products relatively to raw materials is wrongly interpreted when it is taken to assert that the margins between costs and selling prices are narrowing in good times and widening in bad times. Or, if it be true, the statistics fail to prove it or even to indicate it.

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[1] Business Cycles, p. 93; italics mine.

But is this an entire solution of the question? It would seem to indicate only that no statistics for "producers' goods" without distinction of sorts, can be to the purpose of an analysis of the relation between the prices of finished products and the prices of the cost items entering into the products; that there is no warrant in the statistics for the inference that the prices of finished products lag behind the prices of raw materials in general; that the generalization is safe only with reference to equipment goods or "unique goods"; that the parallel between the prices of proprietorship titles and raw materials is entirely misleading; and that the further extension of this generalization to the point of asserting in the large that the more remote the raw materials from the finished product the greater tends to be the divergence in prices, is at the same time unprovable and improbable. Statistical verification or refutation of some of these positions is a task of extraordinary difficulty or even of impossibility. The purposes of Professor Mitchell's investigation involved no responsibilities of this sort — his task was already burdensome enough without the gratuitous assumption of further responsibilities. His interest was neither in the distributive problem at large nor in any particular refinement of it. I have intended merely to present the grounds of my conviction that out of his laborious and brilliant statistical investigations Professor Mitchell has deduced certain distributive doctrines which are not merely unverified by the available data, but are also beyond the possibility of test by statistical methods, at the same time that they are theoretically incredible.

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